REMARKS/ARGUMENTS

Subsequent to the subject Office Action, claims 1-31 are pending in the application.

Claims 1, 8, 25 and 26 were rejected under 35 U.S.C. 102(b) as being anticipated by Hac et al. (6,035,251). Claims 1, 8, 25 and 26 were rejected under 35 U.S.C. 102(b) as being anticipated by Nishizaki et al. (6,415,215). Claims 1-4, 8-12 and 25 were rejected under 35 U.S.C. 102(e) as being anticipated by Adachi (6,615,124). And, claims 1, 8, 25 and 26 were rejected under 35 U.S.C. 102(e) as being anticipated by Kim (6,842,683). Claims 5-7, 13-24 and 27-31 were indicated as distinguishable over the prior art and assumed by Applicant to be allowable thereover. Applicant appreciates the acknowledgement of allowable subject matter in claims 5-7, 13-24 and 27-31. However, Applicant respectfully traverses all anticipation rejections of claims 1-4, 8-12, 25 and 26 in view of the amendments set forth in this response and as further detailed in the remarks herein below.

In an effort to comply with the requirement of form expressly set forth in the subject Office Action, applicant has amended independent claims 1, 8 and 25. Amendments to dependent claims 2, 5, 9, 10, 14, 16, 27 and 29 are also made, such amendments being consistent with the amendments to the respective base claims and for the purpose of maintaining fidelity to 35 U.S.C. §112 requirements in view thereof. The Office Action REMARKS state:

> If applicant intends the term "steering behavior indicator" to represent a particular mathematical variable, it must be clearly defined in the claim to distinguish over the prior art.

More particularly, applicant has amended recitations of "steering behavior indicator" in favor of recitations of "oversteer-understeer coefficient corresponding to a general steering equation." Independent claim 1, for example, now recites as follows:

> 1. A method of controlling a vehicle, comprising:
> providing a plurality of dynamic state inputs to a controller in a vehicle that is adapted to execute a plurality of control loops, each dynamic state input indicative of a dynamic state of the vehicle;

calculating an estimated oversteer-understeer coefficient corresponding to a general steering equation using the controller and the dynamic state inputs during each of the plurality of control loops; wherein the estimated steering coefficient is adapted to provide an indication of the oversteer-understeer behavior of the vehicle during the dynamic state;

storing information related to the dynamic state inputs and the calculation of the estimated steering coefficient for a portion of the plurality of control loops; and

controlling the vehicle in response to the estimated steering coefficient.

Thus, applicants respectfully submit that the amendments presented in this paper comply with the requirement of form expressly set forth in the subject Office Action and respectfully request entry and reconsideration in view of the additional remarks set forth herein below.

Applicant's invention, as exemplified for example, by independent claims 1, 8 and 25 now recite tasks or structure for calculation or determination related to "oversteer-understeer coefficient corresponding to a general steering equation." This oversteer-understeer coefficient corresponding to a general steering equation is given the shorthand designation K_μ. And, further in accordance with additional recitations in the independent claim, this oversteer-understeer coefficient is based on dynamic state inputs and is continually adapted to provide an indication of the real-time oversteer-understeer behavior of the vehicle during the dynamic state, including due to changes to the vehicle and components, vehicle force dynamics and the operating environment. In application to an exemplary vehicle control system, this oversteer/understeer coefficient is continually updated is accordance with the dynamic state inputs and is utilized in the calculation of a yaw rate reference for use in conventional yaw rate control (see e.g. FIG. 3 and paragraph [0026] of the originally filed specification).

None of the references relied upon in the rejections anticipate the claims as amended herein. Hac et al. merely discloses conventional yaw comparisons of actual versus desired yaw rates. In its estimation of desired yaw rate (yaw rate reference), Hac et al. discloses a form of a general steering equation but also discloses vehicle understeer coefficient that is merely based upon fixed cornering stiffness coefficients (c_f and c_r) and other fixed coefficients (a and b). (see e.g. col. 7, ll. 11-20). Applicants cannot identify any portion of

Hac et al. calculating an estimated oversteer-understeer coefficient corresponding to a general steering equation using the controller and the dynamic state inputs during each of the plurality of control loops wherein the estimated steering coefficient is adapted to provide an indication of the oversteer-understeer behavior of the vehicle during the dynamic state as recited, for example, in independent claim 1. Nor can applicants identify any portion of Hac et al. disclosing the correspondingly similar limitations of claims 8 and 25. Nishizaki et al. also merely discloses conventional yaw rate error and control. (see e.g. col. 17, l. 57 through col. 18, l. 10). Applicants cannot identify any portion of Nishizaki et al. calculating an estimated oversteer-understeer coefficient corresponding to a general steering equation using the controller and the dynamic state inputs during each of the plurality of control loops wherein the estimated steering coefficient is adapted to provide an indication of the oversteer-understeer behavior of the vehicle during the dynamic state as recited, for example, in independent claim 1. Nor can applicants identify any portion of Nishizaki et al. disclosing the correspondingly similar limitations of claims 8 and 25. Adachi also fails to disclose calculating an estimated oversteer-understeer coefficient corresponding to a general steering equation using the controller and the dynamic state inputs during each of the plurality of control loops wherein the estimated steering coefficient is adapted to provide an indication of the oversteer-understeer behavior of the vehicle during the dynamic state as recited, for example, in independent claim 1, and the correspondingly similar limitations of claims 8 and 25. Kim merely discloses an understeer/oversteer determining unit which functions to determine whether the vehicle is in an understeer or oversteer condition (see e.g. col. 3, ll. 31-41). Such determination of an understeer/oversteer condition is not to be equated with calculating an estimated oversteer-understeer coefficient corresponding to a general steering equation using the controller and the dynamic state inputs during each of the plurality of control loops wherein the estimated steering coefficient is adapted to provide an indication of the oversteer-understeer behavior of the vehicle during the dynamic state as recited, for example, in independent claim 1, or the correspondingly similar limitations of claims 8 and 25.

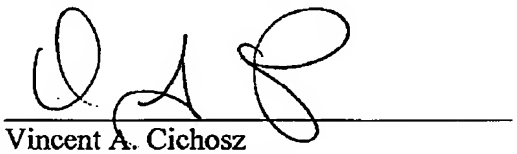
In view of the above, applicant believes that all independent claims 1, 8 and 25 as amended comply with the requirement of form expressly set forth in the subject Office

Action and are patentably distinguishable over the cited references. The remaining rejected claims 2-4, 9-12 and 26, each providing additional limitations to one of the independent claims, are likewise patentably distinguishable over the cited references. Applicant therefore respectfully requests that all pending claims be allowed and allowed to proceed to issue.

If the Examiner has any questions regarding the contents of the present response he may contact Applicant's attorney at the phone number appearing below.

Any fees associated with this response may be charged to General Motors Deposit Account No. 07-0960.

Respectfully submitted,



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